

DETAILED ACTION

In response to an error made in the last Office action, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

A corrected copy of the last Office Action is enclosed. The limitation in claims 1 and 18 requiring a specific range of concentrations of NaH_2PO_4 has been addressed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 5, 8, 10, 7, 12, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873) and optionally Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994).

In regards to claims 1, 8, 10, and 17 Fagerburg teaches a composition for food packages (Column 1, lines 16-18) which contains at least 85 mole % of a terephthalic acid which is reacted with ethylene glycol (Column 3, line 36) to make PET (Column 3, lines 29-30). 0.1 to 0.5 mol% of a polyester modifier with an aromatic ring and the required structure (Column 2, lines 54-68 and Column 3, lines 1-4) are also present. The polyester modifiers contain sodium (Column 3, line 12) as an alkali metal and the final product contains up to 3% diethylene glycol (Column 3, lines 42-44). The polyester has an inherent viscosity ranging from 0.3 to 0.9. Fagerburg is silent as to the presence of Na_2HPO_4 but do teach that a titanium catalyst is present for the etherification reaction.

Banach discloses that when using a titanium catalyst to create PET, it is beneficial to add a phosphate-forming compound such as Na_2HPO_4 (Column 4, lines 33-34) for the benefit of increasing the reactivity of the system (Column 4, lines 25-27). Banach discloses that the catalyst will be present in the amount of 25 ppm to 500 ppm and that the Na_2HPO_4 be present in the amount of 10% to 85% of the weight of the titanium catalyst and a lanthanide catalyst (Column 4, lines 49-52). The tetra-n-butyl titanate catalyst used has a molar weight of 340 g/mole, the hafnium tetrakis

(acetylacetone) (Column 3, line 57) also used in the catalyst has a molecular weight of 574.5 g/mol, and the Na_2HPO_4 used has a molecular weight of 142 g/mole. Assuming a starting concentration of 250 ppm of titanium catalyst and a 90:10 (Column 4, line 6) molar ratio of titanium catalyst to hafnium tetrakis (acetylacetone), there would be a total of 296.9 ppm of catalyst. If the Na_2HPO_4 is present in the amount of 50% of the catalyst (Column 4, lines 49-50), this gives a total of 148.5 ppm of Na_2HPO_4 . This translates to 32.4 ppm of phosphorus alone or 99.3 ppm of phosphate. It is the examiner's position that because Banach does not disclose including NaH_2PO_4 with the Na_2HPO_4 , there will be no NaH_2PO_4 in the resin when Na_2HPO_4 is added to increase the reactivity of the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Na_2HPO_4 within the required concentration ranges for the benefit of increasing the reactivity of the system.

It is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant.

In any event, the previous combination is silent as to the desired NSR of the resin, suggesting to one of ordinary skill in the art that any well known stretch ratio for use in conventional molding processes would be suitable. Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby). One of ordinary skill

would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23). Sprayberry further discloses that this is beneficial for achieving desirable material distribution and optical properties in the final product (Page 2, lines 7-8). Therefore, one of ordinary skill would have found it obvious to match the NSR of the preform from the above combination to its planar stretch ratio for the benefit of achieving desirable material distribution and optical properties (as disclosed by Sprayberry).

In regards to claims 2 and 3, Fagerburg further discloses using an aromatic nucleus.

In regards to claim 5, Fagerburg further discloses that sodium is used (Column 3, line 12).

In regards to claim 7, Fagerburg et al. do not disclose the addition of any other modifying agents other than the difunctional sulfo-monomer (Column 2, line 49). It is therefore the examiner's position that there are none present in the polyester formed.

In regards to claim 12, Fegerson further discloses that the container be formed by biaxial stretching (Column 1, line 20).

In regards to claim 13, it is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant.

In any event, as discussed above, Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). One of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23).

Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Abe et al. (Japanese Patent 03146710).

In regards to claims 4 and 15, Fagerburg is silent as to the location of the bonds on the aromatic ring. Abe shows that it was well known in the art and therefore would have been obvious to one of ordinary skill in the art at the time of the invention to have the carboxylic side groups of the monomer be in the 3 and 5 position relative to the sulfate (English Language Abstract of JP 03146710).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Amano et al. (USP 6096683).

In regards to claim 6, the previous combination is silent as to the form of Na₂HPO₄. Amano discloses that it was well known in the art and therefore would have been obvious to one of ordinary skill in the art at the time of the invention to include the dodecahydrate (Column 8, line 7) form of Na₂HPO₄.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Schmidt et al. (Pre Grant Publication 2002/0177686).

In regards to claim 8, Fagerburg discloses that it is beneficial to minimize the critical stretch ratio in order to decrease the parison wall thickness and reduce processing time (Column 7, lines 19-30) but does not explicitly state what the NSR of the container is.

Schmidt discloses that it was well known in the art at the time of the invention to blow mold PET based (Abstract) containers with an NSR in the required range ([0073]). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to engineer the resin to have an NSR in the required range for the benefit of minimizing the processing time.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Po' et al. (USP 5252282).

In regards to claim 9, the previous combination is silent as to the crystallization half time of the material. Po discloses when modifying terephthalic acid polyesters with aromatic comonomers, it was well known in the art and therefore would have been obvious to one of ordinary skill in the art to have the resin possess a crystallization half time within the required range (Figure 1).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al.

(WO 98/48994) as applied to claim 1 above, and further in view of *PET Packaging Technology* (hereinafter referred to as PPT).

In regards to claim 10, the previous combination teaches that the container be biaxially oriented (Column 1, line 20) but is silent as to the stretch ratios used in creating the PET container. The PPT teaches that it was well known in the art and therefore one of ordinary skill in the art at the time of the invention would have found it obvious to have an axial (hoop) stretch ration of 2.75 (Page 206, Chapter 7.6.6).

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Fagerburg et al. (USP 4499262).

In regards to claim 11, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Feddersen discloses that it was well known in the art and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

In regards to claim 14, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Fedderson discloses that it was well known in the art and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

Claim 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 12 above, and further in view of *PET Packaging Technology* (hereinafter referred to as PPT).

In regards to claim 13, the previous combination teaches that the container be biaxially oriented (Column 1, line 20) but is silent as to the stretch ratios used in creating the PET container. The PPT teaches that it was well known in the art and therefore that one of ordinary skill in the art at the time of the invention would have found it obvious to have an axial (hoop) stretch ratio of 2.75 (Page 206, Chapter 7.6.6).

In regards to claim 16, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Fedderson discloses that it was well known in the art and therefore it would

have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833), Fagerburg et al. (USP 4499262), and Sprayberry et al. (WO 98/48994).

In regards to claim 18, Fagerburg teaches biaxially stretching a parison to form a container (Column 1, line 20) with a composition for food packages (Column 1, lines 16-18) which contains at least 85 mole % of a terephthalic acid which is reacted with ethylene glycol (Column 3, line 36) to make PET (Column 3, lines 29-30). 0.1 to 0.5 mol% of a polyester modifier with an aromatic ring and the required structure (Column 2, lines 54-68 and Column 3, lines 1-4) are also present. The polyester modifiers contain sodium (Column 3, line 12) as an alkali metal and the final product contains up to 3% diethylene glycol (Column 3, lines 42-44). The polyester has an inherent viscosity ranging from 0.3 to 0.9. Fagerburg is silent as to the presence of Na₂HPO₄ but does teach that a titanium catalyst is present for the etherification reaction.

Banach discloses that when using a titanium catalyst to create PET, it is beneficial to add a phosphate-forming compound such as Na₂HPO₄ (Column 4, lines 33-34) for the benefit of increasing the reactivity of the system (Column 4, lines 25-27). Banach discloses that the catalyst will be present in the amount of 25 ppm to 500 ppm

and that the Na_2HPO_4 be present in the amount of 10% to 85% of the weight of the titanium catalyst and a lanthanide catalyst (Column 4, lines 49-52). The tetra-n-butyl titanate catalyst used has a molar weight of 340 g/mole, the hafnium tetrakis (acetylacetonate) (Column 3, line 57) also used in the catalyst has a molecular weight of 574.5 g/mol, and the Na_2HPO_4 used has a molecular weight of 142 g/mole. Assuming a starting concentration of 250 ppm of titanium catalyst and a 90:10 (Column 4, line 6) molar ratio of titanium catalyst to hafnium tetrakis (acetylacetonate), there would be a total of 296.9 ppm of catalyst. If the Na_2HPO_4 is present in the amount of 50% of the catalyst (Column 4, lines 49-50), this gives a total of 148.5 ppm of Na_2HPO_4 . This translates to 32.4 ppm of phosphorus alone or 99.3 ppm of phosphate. It is the examiner's position that because Banach does not disclose including NaH_2PO_4 with the Na_2HPO_4 , there will be no NaH_2PO_4 in the resin when Na_2HPO_4 is added to increase the reactivity of the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Na_2HPO_4 within the required concentration ranges for the benefit of increasing the reactivity of the system.

The previous combination is silent as to the stretching conditions during molding. Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby).

The previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container, suggesting

to one of ordinary skill in the art that any well known container size would be suitable. Fedderson discloses that it was well known in the art to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of the above hypothetical combination to make containers within the range required by Applicant because these are well known container types in the art (as disclosed by Fedderson).

It is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant. In any event, one of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23). Sprayberry further discloses that this is beneficial for achieving desirable material distribution and optical properties in the final product (Page 2, lines 7-8). Therefore, one of ordinary skill would have found it obvious to match the NSR of the preform from the above combination to its planar stretch ratio for the benefit of achieving desirable material distribution and optical properties (as disclosed by Sprayberry).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 7473755 in view of Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994).

The amended claims require that the resin have an NSR of less than 10 (in claim 1) or less than 9.6 (in claims 8 and 17) and that the parison or container define at least one wall which are the only differences in scope between the present claims and those of the '755 patent. One of ordinary skill would have found it obvious to use the material of the '755 patent to create a container (which would inherently have a wall). It is also the examiner's position that because NSR is an inherent property of the resin and the composition of the resin is identical in the '755 patent, it will inherently have the NSR properties now being required by Applicant. In any event, Shelby discloses that it is well

known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]).

Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant in the presently presented claims because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby). One of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23).

Response to Arguments

4. Applicant's arguments filed 5/19/2010 have been fully considered but they are not persuasive.

Applicant argues on pages 10-11 of the remarks that Applicant did not consider evidence of non-obviousness in the specification and that the comparative data in Applicants' specification demonstrates that increasing Na₂HPO₄ unexpectedly provides desirably low natural stretch ratios of less than 10. The examiner begins by noting that Applicant appears to be arguing that the claims of the present Application achieve benefits or results which are not contemplated in the prior art. In response to applicant's argument that specification of the present Application shows that the addition of Na₂HPO₄ to the claimed PET composition unexpectedly provides desirably low NSRs, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when

the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). It is the examiner's position that the motivation to make the proposed combination can be found in the prior art and is provided in the rejections that are made above. Applicant continues by arguing on pages 12-13 that examples 1 and 2 from Table 1 of the present application show that using a resin which is similar to the one disclosed by Banach and adding phosphate compounds according the concentrations outlined by Banach does not produce a resin with the required NSR. It is the examiner's position that this neither provides evidence of the non-obviousness of the combination of references nor provides evidence of the non-inherency of the NSR being claimed by Applicant. The examiner notes that Applicant is arguing the references individually. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The rejection is based on the combination of Fagerburg in view of Banach. Applicant's showing that a resin which "generally representative" (Applicant's remarks, Page 8) of the resin of the secondary reference does not have the claimed NSR does not weigh against the obviousness of the combination of references or the inherent properties of the resin which results from the combination of references.

Applicant argues on page 13 of the remarks that example 3 of Table 1 from the present specification represents a resin according to the proposed modification of Fagerburg by the teachings of Banach. The examiner disagrees and notes that the

evidence provided by Applicant neither weighs against the obviousness of the combination nor disproves the inherency of the NSR properties of the resin which would result from the combination of references. As noted by Applicant, the resin of example 3 is merely "similar" (Page 13 of the remarks, second full paragraph) to the one disclosed by Fagerburg. The examiner would like to point out that the resin of example 3 has an NSR which is also "similar" to that which is being claimed. All Applicant has provided evidence of is that the use of phosphate-containing compounds within the claimed range in the resin disclosed in Japanese Kokai 59-093723 does not produce a resin with the required NSR. The examiner never relied on Japanese Kokai 59-093723 in any of the rejections. The rejections are based on the modification of Fagerburg in view of Banach. Applicant has not provided any evidence showing that the use of phosphate compounds within the claimed ranges with the resin of Fagerburg will not inherently have the required NSR. To the contrary, one of ordinary skill would appreciate from specification of the present Application that all that is required to achieve this beneficial property is merely to combine a resin with the required structure with phosphate compounds within the required range. If Applicant is aware of any additional process steps which allow for the beneficially low NSR to be achieved, Applicant has neither claimed them nor disclosed them in the specification. The examiner maintains that it would have been obvious to use the claimed phosphate composition amounts with a resin of the claimed structure for the reasoning presented in the rejection above (i.e. that Fagerburg discloses a resin with the particular structure being claimed and Banach discloses why it would be obvious to supply phosphate compounds within the claimed

range to such a resin). The examiner further maintains that the motivation that one of ordinary skill would have had to make such a combination is provided in the prior art and cited in the rejection above. The examiner also further maintains that the NSR is inherent property of the resin and that a resin with the composition required by the claims would be expected to have the required NSR.

Applicant argues on page 14 of the remarks that nothing in the cited art suggests the predictability of modifying the amount of Na_2HPO_4 and NaH_2PO_4 stabilizers to achieved an NSR of less than 10 because nothing in Banach describes or suggests to a person of ordinary skill in the art that Na_2HPO_4 should be selected for the claimed resin system having an intrinsic viscosity of 0.6 to 1.0, while excluding or minimizing NaH_2PO_4 to below 9 ppm so that a natural stretch ratio of the material can be beneficially reduced. The examiner begins by noting that Applicant appears to be arguing that the claims of the present Application achieve benefits or results which are not contemplated in the prior art. In response to applicant's argument that specification of the present Application shows that the addition of Na_2HPO_4 to the claimed PET composition unexpectedly provides desirably low NSRs, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). It is the examiner's position that the motivation to make the proposed combination can be found in the prior art and is provided in the rejections that are made

above. Also, Applicant seems to acknowledge the benefit of combining the resin of Fagerburg with the phosphate compounds of Banach on the top of page 15 of the remarks in which it is stated that Banach is concerned with increasing the reaction rate of the process. Banach encompasses the use of Na_2HPO_4 without NaH_2PO_4 . The addition of Na_2HPO_4 alone is encompassed by the disclosure of Banach.

Applicant argues on page 15 of the remarks that Sprayberry leads a person of ordinary skill away from the claimed subject matter because Sprayberry discloses the use of preforms with NSRS above the claimed range. The examiner notes that Applicant is arguing the references individually. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Sprayberry is merely relied upon to show that one of ordinary skill would find it obvious match the planar stretch ratio to the NSR. It was *Shelby* which was used to show that one of ordinary skill would have found it obvious to create a preform with the required NSR.

Applicant argues on page 16 of that Amano is non-analogous art. In response to applicant's argument that Amano is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned,

in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Amano is concerned with the same problem of providing Na₂HPO₄ to a system.

Applicant argues on page 17 of the remarks that the obvious-type double patenting is improper because neither Shelby nor Sprayberry disclose an NSR within the required range. Applicant is directed to the examiner's findings on the references to Shelby and Sprayberry presented above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin Rogers/

/Justin R Fischer/
Primary Examiner, Art Unit 1791